

United States Patent [19]**Ploix**[11] **4,123,346**[45] **Oct. 31, 1978****[54] ELECTROPHORETIC DEVICE**[75] Inventor: **Jean Luc Ploix**, Paris, France[73] Assignee: **Thomson-CSF**, Paris, France[21] Appl. No.: **795,424**[22] Filed: **May 10, 1977****[30] Foreign Application Priority Data**

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204/299 EC; 204/181 R; 350/355; 350/350;
40/463[58] Field of Search **204/299 R, 299 EC, 299 PE,**
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1.5**[56] References Cited****U.S. PATENT DOCUMENTS**3,756,693 9/1973 Ota 350/160 R
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Primary Examiner—Arthur C. Prescott*Attorney, Agent, or Firm*—Roland Plottel**[57] ABSTRACT**

An electrophoretic device defining a fluid tight assembled container filled with a suspension of solid electrically charged particles. Two outer plates of the container are provided with electrodes and part of the inner walls of the container and electrodes are coated with an electret layer that is a layer of dielectric material carrying permanent electrical charges. The electret layer coating one of the outer plates may be removable in order to allow the transfer of the solid electrically charged particles between different electrophoretic media. One of the outer plate may be either transparent allowing thus a presentation of data. The permanent electrical charges of the electret layer introduce a voltage threshold into the control of migration of the suspended particles in the electrophoretic medium.

15 Claims, 9 Drawing Figures